Airworthiness Update: NATSAG

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AIR 4.0P
27 APR 04

NAVAIR

Outline

- NATIP/NATOPS Status
- Role of NAVAIR Airworthiness Office
- Requirements & Funding
- Summary

OPNAV 3510.15

NATIP
Naval Aviation Technical Information Product

TACMAN

NTTP
Naval Tactics, Techniques & Procedures

Technical Product

NAVAIR COGNIZANCE

- Provides Accurate, Current, and Timely Data Release
- Streamlines Engineering Reviews
- Purge Non-Standard Documents

Tactical Product

NSAWC/MAWTS COGNIZANCE

- Aircraft Tactics
- Doctrine Review
- Conferencing

IMPROVES INFORMATION FOR THE WARFIGHTER
NATIP IS THE FOUNDATION FOR NTTP

NAVAIR

NATOPS Transition

- CNO Divested NATOPS Program Per CNO Message 061721Z MAR 03
  - CNAF (N32) Assumed Responsibility for NATOPS Policy (3710.7)
  - NAVAIR (4.0P) Assumed Responsibility for NATOPS Coordination and Products
- CNO Transferred Billets and Funding to Accomplish NATOPS Coordinator Functions
- Interim Change 33 to 3710.7S
- Transferred CNO NATOPS Website

NATOPS/NATIP What Is It?

- Permanent Flight Clearance for USN/USMC Aircraft

NATOPS	NATIP	
– Basic Operating Limits		Store Loadings & Limits
– System Descriptions		System Descriptions
– Emergency Procedures		Safe Escape/ Delivery Data
– Standard Procedures		Crew Systems

- Preferred Way for Disseminating Flight Clearance Information to the Fleet
  - Complete Information in Format Operator can Use
  - Source Document for Training and Automated Tools

Replaces This Message:

2. TAKEOFF CONFIGURATIONS AND LOADINGS: (READ IN TWO COLUMNS)

A. LOAD 1:

STATION 1: AGM-114

STATION 2: TACMAN AUTHORIZED STORE

STATION 3: TACMAN AUTHORIZED STORE

STATION 4: AGM-114

C. MIRROR IMAGE AND DOWNLOADING IAW CURRENT TACMAN IS AUTHORIZED FOR STATIONS 1 THROUGH 4. MIXED STORE LOADINGS INSTRUCTIONS, AS STATED IN THE CURRENT TACMAN SHALL APPLY.

3. LIMITATIONS (MOST RESTRICTIVE LIMITS FROM NATOPS/TACMAN, NAVAIR FLIGHT CLEARANCE OR BELOW SHALL APPLY TO ALL CONFIGURATIONS):

A. CARRIAGE LIMITS:

(1) AIRSPEED: 130 KCAS

(2) NORMAL ACCELERATION: LON

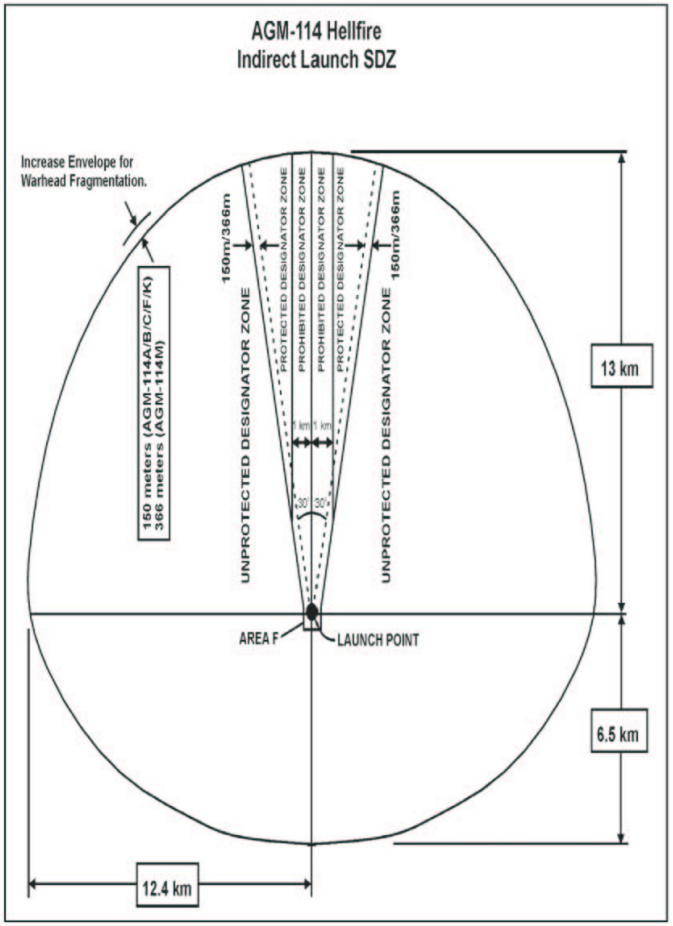
With This,

And This,

And This,

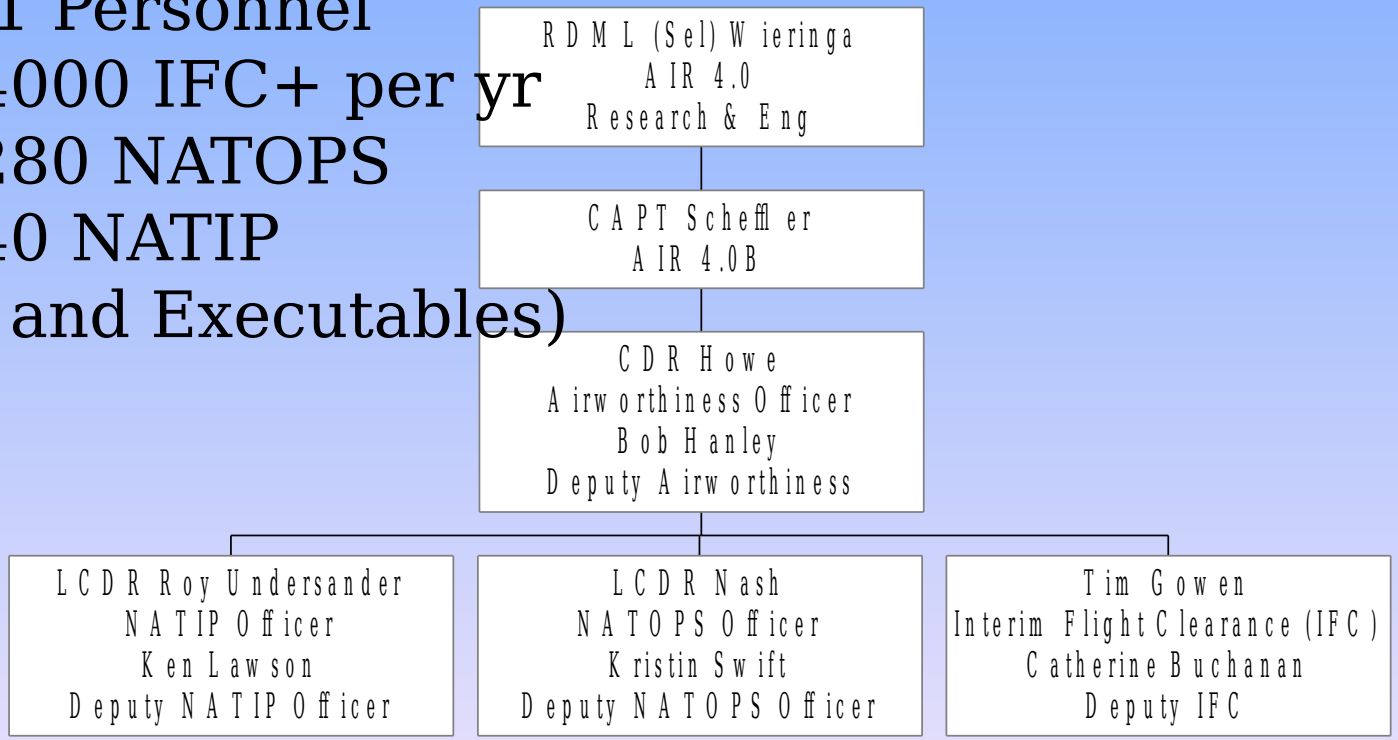
And So On...

Figure D-1 Indirect Hellfire Launch Surface Danger Zones.



Airworthiness Org Chart

Total of 41 Personnel
Manage 4000 IFC+ per yr
Manage 280 NATOPS
Manage 40 NATIP
(Manuals and Executables)



Web Sites

- NATIP - https://natip.navair.navy.mil (Unclassified)
  http://natip.navair.navy.smil.mil (Classified)
  - NATIP Library-Web-master Always Current
- NATOPS - https://natops.navair.navy.mil
  - NATOPS Interim Changes Available
- Sites Use Common Log On
- Issue Resolution System (IRS)
  - Initiate Changes to NATIP, Legacy TACMAN, NATOPS
  - Forum for Fleet Q&A on Technical Issues
- Airworthiness – https://airworthiness.navair.navy.mil
  - Search for Interim Flight Clearances
  - Merging All Three Unclassified Sites Under One

Requirements & Funding

- FY00-NATOPS/TACMAN = $0.0M
- FY04-NATOPS/NATIP = $8.0M (All T/M/S)
- FY05-NATOPS/NATIP = $14.0M (All T/M/S)
- Naval Aviation Cultural Change
  - Typically Choose Hardware Over Information
  - Costly: TPDRs = 90 Lost Work Years
  - Safety & Readiness: Performance Data, Wep Delivery
- NAVAIR Mindset
  - Follow CNAF Requirements: Hardware or Info
  - Only Receive Funding Based on TYCOM Priority List

Action

- If Fleet Doesn’t Say “NATIP/NATOPS is a Priority” the Program will Lose Funding
- Include Requirement for NATOPS/NATIP/NTTP in Message to TYCOM
- Following Attributes will Improve or Stagnate Depending on your Support:
  - Quality and Amount of Information
  - Turn Around Time
  - Executable Programs
  - Readiness

“The instruments of battle are valuable only if one knows how to use them”.

Ardant du Picq

NATIP Example

AH-1W NATIP
AH-1W NAVAL AVIATION TECHNICAL INFORMATION PRODUCT

NTRP 3-22.4-AH1W

Unclassified
.2 = Classified

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS

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**PRIMARY REVIEW AUTHORITY:
NAVAL AIR SYSTEMS COMMAND**

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11 FEBRUARY 2004

CHAPTER 1

WEAPONS DESCRIPTION

1.1 20-mm Ammunition.

1.1.1 Description. A 20-mm round consists of steel or brass cartridge case, an electric primer, propellant powder, and the projectile. The primer is ignited by 28-Vdc electrical power from the aircraft armament system. The primer ignites the propellant powder that forms a gas as it burns, forcing the projectile through the gun barrel. There are two configurations of ammunition (M50 series / PGU), the only significant difference being the projectile.

1.1.1.1 M50. The M50 series ammunition was designed for high-altitude, air-to-air combat. The ammunition is deficient in the air-to-ground mission because of poor ballistic performance at low altitudes; the inability to penetrate lightly armored ground targets; and a high dud rate.

1.1.1.2 PGU. The PGU series is multipurpose ammunition developed to be more effective in the air-to-ground mission. The 20-mm PGU SAPHEI projectile is more effective than the M50 series ammunition projectile. The SAPHEI projectile is a combination of a hardened steel body and pyrotechnic fuze that allows the projectile to penetrate and detonate inside the target. The detonation ignites a zirconium pellet providing a long, persistent spark for improved fire-starting capability. The streamlined projectile reduces the projectile drag coefficient and allows better pyrotechnic ignition resulting in improved graze sensitivity and fewer duds. All PGU projectiles are ballistically the same.

1.1.2 Projectiles. Three classifications of ammunition are discussed, their significant difference being the projectile.

1.1.2.1 HEI. The 20-mm HEI projectile is composed of an incendiary compound, explosive compound, and a fuze. This type of projectile is used against aircraft and light material targets. The PGU-28 SAPHEI projectile replaces the M56 HEI projectile and expands its use to air and ground targets, including light armor.

1.1.2.2 TP. The 20-mm TP ball projectile is a hollow steel body that does not contain filler. This projectile is used for target practice. The PGU-27 TP projectile replaces the M55 projectile as the target practice projectile.

1.1.2.3 TP-T. The M221 TP-T projectile is a steel body with forward and aft cavities. The forward cavity is empty and the aft cavity contains a tracer compound. The PGU-30 TP-T projectile replaces the M221 projectile. The tracer material of the PGU-30 is a magnesium-teflon-vitron mixture that has exceptionally good visibility in the daylight.

1.1.2.4 Mk 149. The 20-mm Mk 149 Mod 0 APDS ammunition is composed of a Mk 68 Mod 0 projectile that consists of a depleted uranium subcaliber penetrator, an aluminum pusher plug, and a glass-filled, nylon-discarding SABOT that breaks into four segments upon leaving the muzzle. The primary use of this ammunition is against hard material targets such as light armored vehicles.

CNAF Responsibilities

- CNAF is the CNO Delegated Approval Authority for Waivers and Deviations from 3710.7
- CNAF (N32) Assumed Responsibilities as Overall NATOPS Program Manager
  - Ongoing Administration of 3710.7
  - Interpretation of OPNAVINST 3710.7 Policy

NATIP Principles

- Support Legacy TACMAN Formats
  - Interim Changes, MSG or Page Changes
  - Web Hosting Legacy Documents
- Produce Accurate and Engineered NATIP Products in a Timely Fashion
  - Keep Pace with NTTP Rewrite Conferences
- Continually Refine and Provide a Superior Product
- Understand Fleet Needs and Deliver
- 21 Day Turn-Around for Routine NATIP Updates

How Do I Get from Legacy TACMAN to NATIP?

TACMAN

Time

Separate Technical from Tactical Info

Reorganize, Update & Revise Technical Info

Produce Digital Format (e.g., PDF)

future

XML Database

Posted on NATIP Website

NAVAIR

Engineering Data Repository

Current

Future

- Accessible From Web
  - Unclassified
  - Classified
- Two Types of Data
  - Computational Tools and Models
  - Engineering Data
- Start Process for New Data
- Archive Old Data
- Utilizing Current NAVAIR Initiatives